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Measuring access: how accurate are patient-reported waiting times?

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ABSTRACT

Introduction: A national audit of waiting times in England’s genitourinary medicine clinics measures patient access. Data are collected by patient questionnaires, which rely upon patients’ recollection of first contact with health services, often several days previously. The aim of this study was to assess the accuracy of patient-reported waiting times.

Methods: Data on true waiting times were collected at the time of patient booking over a three-week period and compared with patient-reported data collected upon clinic attendance. Factors contributing to patient inaccuracy were explored.

Results: Of 341 patients providing initial data, 255 attended; 207 as appointments and 48 ‘walk-in’. The accuracy of patient-reported waiting times overall was 52% (133/255). 85% of patients (216/255) correctly identified themselves as seen within or outside of 48 hours. 17% of patients (17/103) seen within 48 hours reported a longer waiting period, whereas 20% of patients (22/108) reporting waits under 48 hours were seen outside that period. Men were more likely to overestimate their waiting time (10.4% vs. 3.1%; p = 0.02). The sensitivity of patient-completed questionnaires as a tool for assessing waiting times of less than 48 hours was 83.5%. The specificity and positive predictive value were 85.5% and 79.6%, respectively.

Conclusion: The overall accuracy of patient reported waiting times was poor. Although nearly one in six patients misclassified themselves as being seen within or outside of 48 hours, given the under and overreporting rates observed, the overall impact on Health Protection Agency waiting time data is likely to be limited.

Surveys have highlighted the problem of poor access to genitourinary medicine (GUM) clinics in England.1,2,3 Since 2004 the Health Protection Agency (HPA), in collaboration with the British Association for Sexual Health and HIV, has carried out quarterly audits of waiting times for GUM clinics on behalf of the Department of Health. These reports of age and gender-specific waiting times at local and national levels measure progress towards governmental targets of 48 hour waits2 and help plan sexual health service provision. All patients attending for the first time with a new episode (defined as a patient not seen within six weeks) are included. Data are collected via a patient-completed questionnaire, which relies upon patients’ recollection of events at the time of first contact with health services that may have taken place several days before. The aim of this study was to assess the accuracy of patient-reported waiting times.

METHODS

This prospective study directly compared true clinic waiting times collected by an investigator at the time of patient booking with patient-reported waiting times collected upon clinic attendance. An investigator answered routine telephone calls to the GUM clinic. Over the 15-day study period, all patients contacting her for a new or rebook GUM appointment were included in the study. Investigator-led bias was minimised by the use of a standardised script to supply and gather information from each patient. This information was identical to that gathered by the HPA survey in terms of the range (demographic data and time since first attempting to contact the clinic for an appointment) and wording of questions. Each patient was given the option to attend the next walk-in clinic within 48 hours, or the next available appointment (see Appendix 1). On attending the department patients completed a questionnaire that mirrored the information obtained by the investigator at the time of booking (see Appendices 2 and 3 online).

In order to minimize disruption to services, an answerphone message was activated outside clinic hours and when the line was engaged, directing patients to the walk-in clinic, bypassing the investigator. As a consequence, many patients attending walk-in could not be included in the study population.

The two sets of data were anonymously linked using unique reference numbers. Statistical analyses were performed using STATA version 9.0 (STATA Corp., College Station, Texas, USA). True waiting times were compared with patient-reported data, overall and after adjustment for working days (as per the HPA survey protocol) to calculate sensitivity and specificity for patient recall. Factors contributing to patient inaccuracy were explored using the χ2 test, and McNemar’s test was used to explore systematic patterns in the direction of discordance among discordant matched pairs.

RESULTS

Of 341 patients included in the study, 255 (75%) attended and completed questionnaires; 130 women and 125 men, 48 “walk-in” and 207 booked appointments.

Exact concordance between investigator and patient-recorded waiting time was 52% (133/255). After adjustment for working days, 85% of patients (216/255) correctly identified themselves as seen within or outside of 48 hours. Seventeen per cent of patients (17/103) seen within 48 hours misclassified themselves outside this period, whereas 20% of patients (22/108) reporting waits of less than 48 hours were actually seen outside that time (see table 1). Men were more likely to
overestimate a waiting time actually within 48 hours (13/125 (10.4%) men versus 4/130 (3.1%) women, p<0.02), but there was no association with the true length of wait, age or type of appointment.

The sensitivity of patient-reported questionnaires as a tool for assessing waiting times of less than 48 hours was 83.5%. The specificity and positive predictive value were 85.5% and 79.6%, respectively.

**DISCUSSION**

Nearly one in six patients (39/255) in this study misclassified themselves as seen within or outside of the target 48 hour waiting time period. As similar proportions of patients overestimated and underestimated their waiting time, however, inaccurate estimates are unlikely to generate a systematic bias in HPA waiting time data. Men were more likely to overestimate their waiting time than women.

Previous work looking at the accuracy of patient-reported resource use data has demonstrated conflicting results. Some studies have shown that patient self-reporting underestimates resource use compared with medical records, although it is less inaccurate with shorter recall periods. Others, however, reported an overestimation of healthcare utilisation on the basis of patient self-reporting. In reporting the timing of clinical events, patients have been shown to underestimate time intervals since last screening tests. There are, however, few data on the accuracy of self-reported waiting times.

As stated above, we were not able to include patients who attended walk-in without a telephone interview. There was, however, no significant difference in the overestimation of waiting times between walk-in or booked appointments, suggesting that the results reflect the wider clinic population.

In the absence of comprehensive, objective measures of patient waiting time, it is reassuring that existing survey data are fairly accurate in measuring targets. The overestimation of waiting times by men, however, remains unexplained.

**Competing interests:** None declared

**REFERENCES**